

## REMARKS

This Amendment is submitted in response to the non-final Office Action mailed on October 2, 2008. A Terminal Disclaimer and a petition for a one month extension of time are submitted herewith. The Director is authorized to charge the amount of \$270.00 for the cost of the Terminal Disclaimer (\$140.00) and the petition for a one month extension of time (\$130.00), and any additional fees which may be required, or to credit any overpayment to Deposit Account No. 02-1818. If such a withdrawal is made, please indicate the Attorney Docket No. 112701-610 on the account statement.

Claims 1-23 are pending in this application. In the Office Action, Claims 1-23 are rejected under 35 U.S.C. §103. Claims 1-23 are further provisionally rejected for nonstatutory double patenting. For at least the reasons set forth below, Applicants respectfully submit that the rejections should be withdrawn.

Applicants note that Claims 1-23 have been amended solely for clarification purposes. These amendments do not add new matter. The amendments are supported in the Specification at, for example, page 1, paragraphs 11-16; pages 1-2, paragraph 22; page 2, paragraph 23; page 3, paragraphs 46 and 51-55.

In the Office Action, Claims 1-5, 8, 11 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over EP 1,178,118 A1 to Biji et al. ("*Biji*") in view of Bailey's Industrial Oil and Fat Products, 5th Ed. Vol. 4 ("*Bailey's*"). For at least the reasons set forth below, Applicants respectfully submit that one of ordinary skill in the art would have no reason to combine the cited references. Furthermore, even if combinable, the cited references fail to disclose or suggest each and every element of independent Claims 1 and 11 and Claims 2-5, 8 and 18 that depend therefrom.

Currently amended independent Claim 1 recites, in part, a process for preparing a stable oil containing long-chain polyunsaturated fatty acids in the form of triacylglycerols comprising the steps of: compressing at least one biomass obtained from the culture of a microorganism in a dry state so as to obtain a first pressed oil and a cake. Similarly, currently amended independent Claim 11 recites, in part, a foodstuff comprising a stable oil containing long-chain polyunsaturated fatty acids in the form of triacylglycerols, wherein the stable oil is obtained by the steps of: compressing at least one biomass obtained from a culture of a microorganism in a dry state to produce a first pressed oil and a cake.

Conventional methods of obtaining an oil containing long-chain polyunsaturated fatty acids ("LC-PUFAs") involve extracting the oil from a biomass fermentation medium with a solvent or preparing an aqueous suspension of the biomass and subsequently separating the oil and water phases. See, Specification, page 1, paragraph 2, lines 5-9; paragraph 9, lines 1-6. However, extraction with a solvent such as hexane requires several refining stages to remove the impurities in the oil, thus exposing the oil to conditions that decrease its quality. See, Specification, page 1, paragraph 8, lines 1-7. Furthermore, preparing an aqueous suspension of the biomass results in a crude oil that is contaminated with several impurities due to the presence of water. See, Specification, page 1, paragraph 9, lines 1-11. Therefore, the present claims are directed to obtaining an oil containing LC-PUFAs by compressing a biomass in a dry state. Because the biomass is compressed in the dry state, the oil obtained contains fewer impurities than a stable oil obtained via conventional methods. See, Specification, page 1, paragraph 9, lines 6-11; page 3, paragraph 63, lines 1-3. In contrast, the cited references are deficient with respect to the present claims.

For example, one of ordinary skill in the art would have no reason to combine the cited references to arrive at the present claims because the combination would change the principle of operation of *Bailey's*. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). For example, the Patent Office relies on *Bailey's* for the disclosure of treating the oil with an adsorbent. See, Office Action, page 2, lines 18-20; page 3, lines 1-6. However, the portions of *Bailey's* relied on by the Patent Office are directed to utilizing bleaching clay as an adsorbent to remove particulate matter such as pigments, soaps and phosphatides from the oil. See, *Bailey's*, page 396, Section 1.7. In contrast, *Biji* is entirely directed to washing the cell walls of the biomass with water and subsequently separating the aqueous phase (containing the cell wall debris) from the oil phase to remove the particulate matter in the cell wall debris from the oil. See, *Biji*, Abstract, lines 4-13. As such, the oil obtained in *Biji* is free from cell wall debris because such debris is contained in the aqueous phase. See, *Biji*, column 3, lines 14-17; column 4, lines 22-29. If one of ordinary skill in the art used the adsorbent disclosed in *Bailey's* with the debris-free oil obtained by *Biji* as suggested by the Patent Office, it would change the principle of operation of *Bailey's* because the particulate

matter would already be removed from the oil and the use of the adsorbent would therefore be unnecessary. Thus, one of ordinary skill in the art would have no reason to combine the cited references to arrive at the present claims.

Moreover, even if combinable, the cited references fail to disclose or suggest compressing at least one biomass obtained from the culture of a microorganism in a dry state as required, in part, by independent Claims 1 and 11 and Claims 2-5, 8 and 18 that depend therefrom. The Patent Office asserts that *Biji* discloses extraction by a mechanical technique such as cold pressing. See, Office Action, page 2, lines 12-14. However, the portion of *Biji* relied on by the Patent Office merely discloses washing the cell walls of the biomass with water and subsequently disrupting the cell walls by techniques such as cold pressing. See, *Biji*, column 3, lines 9-24 and 48-51. Nowhere does *Biji* disclose that such cold pressing is performed in a dry state, nor does the Patent Office cite support for such claimed element.

In fact, *Biji* is entirely directed to a wet process for obtaining oil from a biomass. See, *Biji*, Abstract, lines 4-13; column 3, lines 9-24; column 4, lines 22-29. For example, *Biji* discloses that its oil is obtained by disrupting the cell walls using a technique such as pressing and then separating an oily layer containing PUFAs from an aqueous layer containing cell wall debris. See, *Biji*, column 3, lines 21-22 and 48-50 (“The cell walls of the microbial cells can then be disrupted. . . . Other methods of disrupting the cell walls include. . . pressing”); column 4, lines 26-28 (“The oily layer comprising the PUFA can then be separated from the aqueous layer”). This indicates that the aqueous layer is present during the pressing of the biomass. *Biji* expressly states that “[a]fter fermentation, the microbial cells are pasteurized, washed and the cell walls lysed or disrupted. . . . The oil is then separated. . . from an aqueous phase (containing the cell wall debris).” See, *Biji*, Abstract, lines 4-5 and 9-13. As such, *Biji* is entirely directed to pressing the biomass with water present and fails to disclose compressing the biomass in a dry state. Unlike the oil of the present claims, the crude oil obtained by *Biji* is contaminated with impurities such as polar lipids and residues of proteins due to the presence of water. See, Specification, page 1, paragraph 9, lines 6-11. The Patent Office relies on *Bailey’s* merely for the disclosure of treating the oil with an adsorbent. See, Office Action, page 2, lines 18-20; page 3, lines 1-6. Thus, the cited references fail to disclose or suggest compressing at least one biomass obtained from the culture of a microorganism in a dry state in accordance with the present claims.

Accordingly, Applicants respectfully request that the rejection of Claims 1-5, 8, 11 and 18 under 35 U.S.C. §103(a) to *Biji* and *Bailey's* be withdrawn.

In the Office Action, Claims 6-7, 9-10, 12-17 and 19-23 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Biji* in view of *Bailey's* and further in view of International Patent Application No. WO 92/012711 to Kyle ("*Martek*") or GB 2,241,503 A to Polman et al. ("*Polman*"). As discussed previously, *Biji* and *Bailey's* fail to disclose or suggest compressing at least one biomass obtained from the culture of a microorganism in a dry state as required, in part, by independent Claims 1 and 12-17 and Claims 6-7, 9-10 and 19-23 that depend therefrom. The Patent Office relies on *Martek* and *Polman* merely for the disclosure of the use of carrier oil with the microbial oil. See, Office Action, page 3, lines 11-13; page 4, lines 1-2 and 9-17. Thus, Applicants respectfully submit that *Martek* and *Polman* fail to remedy the deficiencies of *Biji* and *Bailey's*.

Accordingly, Applicants respectfully request that the rejection of Claims 6-7, 9-10, 12-17 and 19-23 under 35 U.S.C. §103(a) to *Biji* in view of *Bailey's* and further in view of *Martek* or *Polman* be reconsidered and withdrawn.

In the Office Action, Claims 1-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over Claims 1-19 of U.S. Application No. 10/658,522. For purposes of advancing the prosecution of this application, Applicants have elected to overcome such rejection through the enclosed Terminal Disclaimer. Such election shall not be deemed an admission as to the propriety or accuracy of the Patent Office's conclusions or rejections.

Accordingly, Applicants respectfully request that the provisional rejection of Claims 1-23 under obviousness-type double patenting be withdrawn.

In the Office Action, Claims 1-23 are provisionally rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Application No. 10/658,522. U.S. Application No. 10/658,522 is a continuation of PCT/EP02/02333, which was filed on March 7, 2002 with Societe des Produits Nestle S.A. as the applicant. The present application is a national stage entry of PCT/EP03/08745, which was filed on August 7, 2003 with Nestec S.A. as the applicant. Societe des Produits Nestle S.A. and Nestec S.A. are affiliate corporations. As such, Applicants respectfully submit that both applications were owned by the same person or subject to an obligation of assignment to the same person at the time the claimed invention was made.

Accordingly, Applicants respectfully request that the provisional rejection of Claims 1-23 under 35 U.S.C. §103(a) be withdrawn.

In the Office Action, Claims 7-10 are rejected under 35 U.S.C. §103(a) as being unpatentable over International Patent Application No. WO 96/21037 to Kyle ("*Kyle*") in view of U.S. Patent No. 4,465,699 to Pagliaro et al. ("*Pagliaro*"). The Patent Office asserts that *Pagliaro* discloses the use of vegetable oil as an alternative to organic solvents and that it would have thus been obvious to one of skill in the art to use an oil to extract microbial oil from a biomass rather than a solvent such as hexane. See, Office Action, page 6, lines 17-19; page 7, lines 1-3. However, Applicants respectfully submit that Claims 7-10 do not recite extracting microbial oil from a biomass using another oil but rather compressing at least one biomass obtained from the culture of a microorganism in a dry state so as to obtain a first pressed oil and a cake and bringing a carrier oil into contact with the press cake of the biomass so as to form a mixture and transfer the long-chain polyunsaturated fatty acid(s) in the form of triacylglycerols to the carrier oil, wherein the mixture is subjected to pressing to obtain a second pressed oil as recited, in part, by Claims 1 and 6 from which Claims 7 and 9-10 depend. Furthermore, Claim 8 recites a process according to Claim 1, wherein the walls of the cells of the microorganisms are broken by pressing. As such, Claim 8 is not directed to extracting microbial oil from a biomass using another oil as suggested by the Patent Office but rather compressing a biomass in a dry state to obtain the microbial oil. Applicants respectfully submit that the cited references fail to disclose every element of independent Claim 1 from which Claims 7-10 depend.

For example, the cited references fail to disclose compressing at least one biomass obtained from the culture of a microorganism in a dry state as required, in part, by independent Claim 1 from which Claims 7-10 depend. As admitted by the Patent Office, *Kyle* is entirely directed to using solvents such as hexane to extract oil from a biomass. See, Office Action, page 6, lines 12-14; *Kyle*, page 13, lines 15-21. Furthermore, *Pagliaro* is entirely directed to extracting caffeine from coffee using vegetable oil. See, Office Action, page 6, lines 17-18; *Pagliaro*, Abstract; column 1, lines 50-65. Nowhere do the cited references disclose or suggest pressing a biomass in a dry state to obtain an oil containing LC-PUFAs, nor does the Patent Office cite support for such claimed element. Thus, Applicants respectfully submit that *Kyle* and *Pagliaro* fail to disclose compressing at least one biomass obtained from the culture of a microorganism in a dry state as required, in part, by Claim 1 from which Claims 7-10 depend.

Accordingly, Applicants respectfully request that the rejection of Claims 7-10 under 35 U.S.C. §103(a) to *Kyle* in view of *Pagliaro* be reconsidered and withdrawn.

For the foregoing reasons, Applicants respectfully request reconsideration of the above-identified patent application and earnestly solicit an early allowance of same. In the event there remains any impediment to allowance of the claims that could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Respectfully submitted,

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